

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 2-20 were pending in this application. In this Amendment, Applicants have amended claims 2, 12, and 18, and have not added or canceled any claims. Accordingly, claims 2-20 will still be pending herein upon entry of this Amendment.

In the Office Action mailed June 22, 2009, the Examiner rejected claims 2 and 7-20 under 35 U.S.C. § 102(e) as being anticipated by WO 03/082480 to Matsunaga et al. ("Matsunaga"), and rejected claims 3-6 under 35 U.S.C. § 103(a) as being unpatentable over Matsunaga in view of EP 0930641 to Kiguchi et al. ("Kiguchi"). To the extent that those rejections might still be applied to the currently pending claims, Applicants respectfully traverse the rejections.

Applicants have amended independent claims 2, 12, and 18 to clarify features of the present invention distinguishable over Matsunaga, relating to the lateral outlet openings defined in the dispensing tube of the claimed apparatus. Specifically, the amendments clarify that the lateral outlet openings dispense the second material onto the layer of the nanocrystalline first material, and that the lateral outlet openings are distributed along a length of the dispensing tube such that the second material is dispensed onto the layer of the nanocrystalline first material in a homogenous layer having a predetermined width. The applied prior art fails to teach or suggest these structural features.

Regarding Matsunaga, Applicants respectfully disagree with the Examiner's reliance on needle 3 and the element labeled "DRAIN" as disclosing the claimed lateral outlet openings.

The needle 3 itself is not an opening and is, in fact, moved up and down to form a clearance between the needle 3 and valve seat 4, through which to dispense liquid including solid particles. (Page 12, line 20 to page 13, line 1.) Moreover, it is entirely unclear whether the element labeled "DRAIN" is in fluid communication with the tubes 10-1 and 10-2 connecting the two syringes 5-1 and 5-2, which the Examiner relied on as the claimed tubular dispensing means. Matsunaga provides no description of the structure or function of the element labeled "DRAIN." In addition, other portions of Matsunaga emphasize that the flow of liquid including solid particles is in either direction "a" or "b" moving from one syringe to the other while being dispensed through the opening in the bottom of valve seat 4. (See, e.g., page 12, lines 15-20 and page 13, lines 11-24.) There is simply no indication that liquid flows to the element labeled "DRAIN." Indeed, the element labeled "DRAIN" could be part of the pneumatic system that acts upon piston 2 and includes the elements labeled "AIR SUPPLY" and the three-way solenoid valve 12.

Given the lack of clarity, Applicants respectfully submit that Matsunaga does not teach or suggest a *plurality* of lateral outlet openings. At most, Matsunaga teaches a *single* opening in the valve seat 4 from which liquid including solid particles is dispensed. In addition, even if the element labeled "DRAIN" were considered to be an outlet (which Applicants submit that it cannot be), that element would not dispense material onto a layer of first material, as recited in amended claims 2, 12, and 18. As shown in Figure 1 of Matsunaga, the element labeled "DRAIN" is located above the connecting pipes 10-1 and 10-2 and far apart from the object W.

Amended claims 2, 12, and 18 also clarify the positions of the lateral outlet openings, reciting the openings as *distributed along a length of the dispensing tube* such that the second material is dispensed onto the layer of the nanocrystalline first material in a homogenous layer having a predetermined width. Support for this feature can be found in the present specification,

for example, at page 1, lines 30-33; page 2, lines 1-3; page 3, lines 34-37; page 4, lines 19-22; and page 5, lines 4-9. In contrast to the recited plurality of lateral outlet openings and the positions of those openings, Matsunaga merely teaches a single opening in valve seat 4 dispensing liquid from a single point as shown in Figure 1. That single opening does not achieve the homogenous layer having a predetermined width provided by the present invention. Kiguchi fails to cure these deficiencies of Matsunaga.

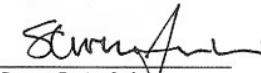
Applicants therefore respectfully submit that amended claims 2, 12, and 18 are patentable over the prior art. In addition, Applicants respectfully submit that dependent claims 3-11, 13-17, 19, and 20 are also patentable due at least to their dependence on an allowable base claim and for the additional features recited therein.

With reference to claims 9, 15, and 18, Applicants further respectfully submit that Matsunaga fails to teach or suggest lateral outlet openings provided in a top side of the horizontally disposed dispensing tube. As discussed above, the element labeled "DRAIN" in Matsunaga cannot be properly interpreted to be a lateral outlet opening. The opening in valve seat 4 is therefore the only outlet opening disclosed in Matsunaga. Since that opening is clearly directed downward as shown in Figure 1, Matsunaga fails to teach or suggest the recited lateral outlet openings provided in a *top* side of the dispensing tube. For that additional reason, Applicants respectfully submit that claims 9, 15, and 18 are patentable over the prior art.

In view of the foregoing, all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone Applicants' undersigned representative at the number listed below.

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